

Qotom Q335G4-S05

Qotom Mini PC Q335G4 Firewall Router User Manual

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your Qotom Mini PC Q335G4 Firewall Router. This device is designed for reliable and flexible networking, serving as a soft router, firewall, or home lab network hub. It features an Intel Core i3-5005U processor and multiple Gigabit Ethernet ports in a fanless, compact design.

2. SAFETY INFORMATION

- Always use the provided power adapter. Using an incorrect adapter may damage the device and void the warranty.
- Do not expose the device to water, moisture, or extreme temperatures.
- Ensure proper ventilation. Although fanless, placing the device in an enclosed space without airflow can lead to overheating.
- Avoid opening the casing unless performing a hardware upgrade as instructed. Refer to qualified personnel for repairs.
- Keep the device away from strong magnetic fields.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Qotom Mini PC Q335G4 Unit
- Power Adapter
- Heatsink (pre-installed or included for assembly)
- Mounting accessories (if applicable)

4. PRODUCT OVERVIEW

The Qotom Mini PC Q335G4 is a compact, fanless system designed for network applications. It features a robust aluminum unibody chassis for passive cooling.

Front Panel



Image: Front view of the Qotom Mini PC Q335G4. This image displays the front panel of the device, featuring two USB 2.0 ports, two USB 3.0 ports, an HD (HDMI) port, a COM (serial) port, and the power button with an LED indicator.

- **Power Button:** Press to power on/off.
- **Power LED:** Indicates power status.
- **USB 2.0 Ports (x2):** For connecting peripherals.
- **USB 3.0 Ports (x2):** For high-speed data transfer.
- **HD Port:** For display output (HDMI compatible).
- **COM Port (RS-232):** For serial console access.

Rear Panel

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Image: Rear view of the Qotom Mini PC Q335G4. This image shows the back of the device, highlighting the DC 12V power input, four Intel Gigabit LAN ports (labeled 1-4), and LED indicators for network activity.

- **DC 12V Input:** Connect the power adapter here.
- **LAN Ports (x4):** Intel i210-AT Gigabit Ethernet ports for network connectivity.
- **HDD LED:** Indicates hard drive activity.

Internal Components

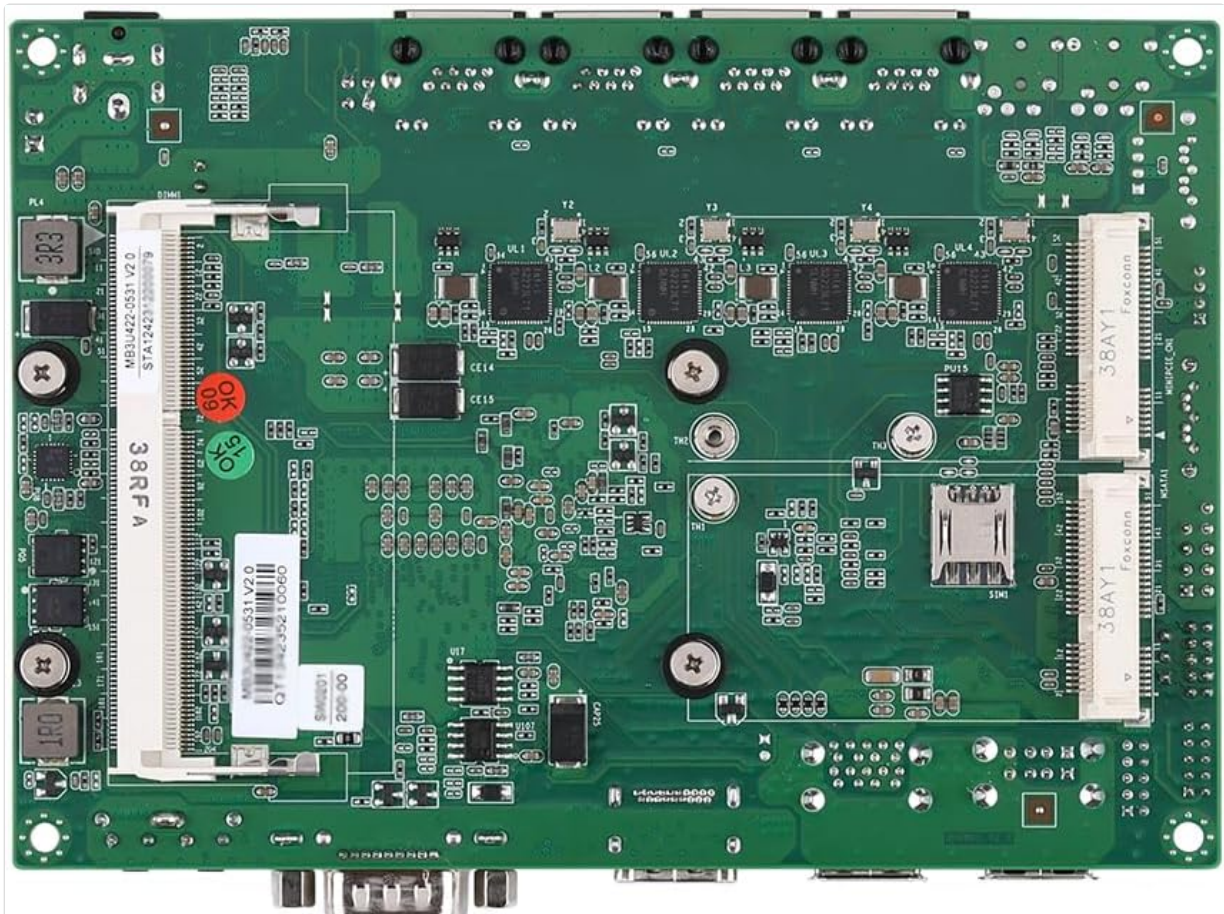


Image: Internal view of the Qotom Mini PC Q335G4 motherboard. This image displays the internal layout, including the

SODIMM slot for DDR3L RAM, the mSATA SSD slot, and the 2.5-inch SATA drive bay connector.

- **DDR3L SO-DIMM Slot:** Supports up to 8GB RAM. Note: Only DDR3L (low voltage) memory is compatible.
- **mSATA SSD Slot:** For the primary operating system drive.
- **2.5" SATA Bay:** For additional storage (HDD/SSD).

5. SETUP

5.1 Hardware Installation (if applicable)

Your Qotom Mini PC Q335G4 comes with 4GB RAM and a 128GB SSD pre-installed. If you purchased a barebones unit or wish to upgrade, follow these steps:

1. **Open the Casing:** Carefully remove the screws on the side panels to access the motherboard.
2. **Install RAM:** Insert DDR3L SO-DIMM memory modules into the designated slot. Ensure they are seated firmly. **Important:** Only DDR3L (low voltage) memory is compatible. Standard DDR3 memory will not work.
3. **Install mSATA SSD:** Insert the mSATA SSD into its slot and secure it with the provided screw.
4. **Install 2.5" SATA Drive:** If adding a 2.5-inch HDD or SSD, connect it to the SATA data and power connectors and secure it within the drive bay.
5. **Close the Casing:** Reattach the side panels and secure them with screws.

5.2 Initial Connection

1. **Connect Display:** Connect a monitor to the HD (HDMI) port.
2. **Connect Peripherals:** Connect a USB keyboard and mouse to the USB ports.
3. **Connect Network:** Connect your internet source (e.g., modem) to one of the LAN ports (typically LAN1 for WAN) and your internal network devices to other LAN ports.
4. **Connect Power:** Plug the power adapter into the DC 12V input on the rear panel, then plug the adapter into a power outlet.
5. **Power On:** Press the power button on the front panel.

6. OPERATING SYSTEM INSTALLATION

The device typically comes with an inactive version of Windows 10 for testing purposes. For optimal performance as a firewall or router, it is recommended to install a specialized operating system.

6.1 Accessing BIOS/UEFI

To install a new operating system, you will need to access the BIOS/UEFI settings to configure boot options.

- During startup, repeatedly press the **DEL** or **F2** key (common keys, may vary) to enter the BIOS setup utility.
- Navigate to the **Boot** menu to set the boot order from a USB drive or other installation media.
- Save changes and exit BIOS to boot from your chosen media.

6.2 Supported Operating Systems

This Mini PC supports a wide range of operating systems suitable for network appliances:

- Windows 7/8/10
- Linux distributions (e.g., Debian, Ubuntu)
- Firewall/Router OS (e.g., pfSense, OPNsense, OpenWrt, Sophos, Untangle)

Follow the specific installation instructions for your chosen operating system. Ensure you download the correct drivers if necessary, although Intel LAN drivers are generally well-supported.

6.3 Serial Console Setup

For headless operation or advanced configuration, the COM port can be used for serial console access.

- Connect a null modem serial cable from the Mini PC's COM port to a computer with a serial port or a USB-to-serial adapter.
- Configure your terminal emulator (e.g., PuTTY) with the following settings: **115200 baud, 8 data bits, No parity, 1 stop bit (115200/8/N/1)**.
- Ensure the serial port is enabled and configured correctly within your operating system's settings.

7. OPERATION

7.1 Basic Usage

Once your operating system is installed and configured, the Qotom Mini PC Q335G4 functions as a powerful network device. Its Intel Core i3 processor and multiple LAN ports make it suitable for handling significant network traffic and complex firewall rules.

- **Fanless Design:** The aluminum chassis provides passive cooling, ensuring silent operation and reducing dust buildup. This makes it ideal for environments where noise is a concern.
- **24/7 Operation:** Designed for continuous operation with minimal power consumption.
- **AES-NI Support:** The Intel Core i3-5005U processor supports AES-NI, which accelerates encryption and decryption tasks, beneficial for VPN and secure communications.

7.2 Power Management

The device supports various power management features through the BIOS and operating system. You can configure it to automatically power on after a power loss, which is crucial for network infrastructure devices.

- Access BIOS settings to enable 'Restore AC Power Loss' or similar options to ensure the device restarts automatically after a power outage.
- Within your operating system, configure power-saving modes if desired, though for firewall/router applications, consistent performance is usually prioritized.

8. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Qotom Mini PC.

- **Cleaning:** Periodically clean the exterior of the device with a soft, dry cloth. Ensure vents (if any) are free from dust accumulation. As it is fanless, internal dust buildup is minimal but can still occur over long periods.
- **Software Updates:** Keep your operating system and any installed software up to date to ensure security and performance.

- **Firmware Updates:** Check the Qotom official website for any BIOS/UEFI firmware updates. Follow instructions carefully when performing firmware updates.
- **Environmental Conditions:** Operate the device in a cool, dry environment, away from direct sunlight and heat sources.

9. TROUBLESHOOTING

This section addresses common issues you might encounter.

9.1 No Power/No Boot

- **Check Power Connection:** Ensure the power adapter is securely connected to the device and the wall outlet.
- **Verify Power Adapter:** Confirm you are using the correct 12V DC power adapter supplied with the unit.
- **Test Outlet:** Try plugging the adapter into a different working power outlet.

9.2 Operating System Not Loading

- **Check Boot Order:** Access BIOS/UEFI and verify that the boot order is correctly set to your SSD/mSATA drive.
- **Verify Drive Installation:** If you installed the SSD/mSATA yourself, ensure it is properly seated and connected.
- **Reinstall OS:** If the OS is corrupted, you may need to reinstall it.

9.3 Network Connectivity Issues

- **Check Cables:** Ensure Ethernet cables are securely connected to the LAN ports and your network devices.
- **Verify OS Configuration:** Confirm that your operating system's network interfaces are correctly configured (IP addresses, subnets, gateways).
- **LAN Port Mapping:** Note that the physical labeling of LAN ports (1-4) may not directly correspond to the logical interface names (e.g., igb0, igb1) in some operating systems like pfSense. You may need to identify the correct mapping during OS setup.
- **Driver Installation:** Ensure all necessary network drivers are installed for your operating system.

9.4 Serial Port Not Working

- **BIOS Settings:** Check BIOS settings to ensure the serial port is enabled.
- **Cable Type:** Use a null modem serial cable.
- **Terminal Settings:** Double-check your terminal emulator settings (115200/8/N/1).
- **OS Support:** Verify that your operating system supports and has drivers for the serial port.

10. SPECIFICATIONS

Feature	Specification
Model Name	Q335G4-S05
Processor	Intel Core i3-5005U (Dual Core, 2.0 GHz, 3M Cache)
TDP	15 W
AES-NI Support	Yes
RAM	4 GB DDR3L SODIMM (Expandable up to 8GB)
Storage	128 GB mSATA SSD (Supports 2.5" SATA HDD/SSD expansion)
Graphics Coprocessor	Intel HD Graphics 5500
LAN Ports	4 x Intel i210-AT Gigabit Ethernet
USB Ports	2 x USB 2.0, 2 x USB 3.0
Display Output	1 x HD (HDMI compatible)
Serial Port	1 x COM (RS-232)
Operating System (Preload)	Inactive Windows 10 (for test)
Power Source	DC 12V
Dimensions (LxWxH)	7.36 x 4.37 x 1.93 inches (187 x 111 x 50 mm)
Item Weight	4.4 pounds
Hardware Platform	PC

11. WARRANTY INFORMATION

Qotom products typically come with a standard manufacturer's warranty. Please refer to your purchase documentation or the official Qotom website for specific warranty terms and conditions, including duration and coverage details. Keep your proof of purchase for warranty claims.

12. SUPPORT

For technical assistance, product inquiries, or further support, please contact Qotom customer service through their official website or the retailer from whom you purchased the device. Online resources, including FAQs and driver downloads, may also be available on the Qotom support page.